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GREASE GUN LOADING PAIL BASE FOR GREASE CONTAINERS WITH CUTTER AND INTERLOCK MEANS FOR SAID CONTAINERS

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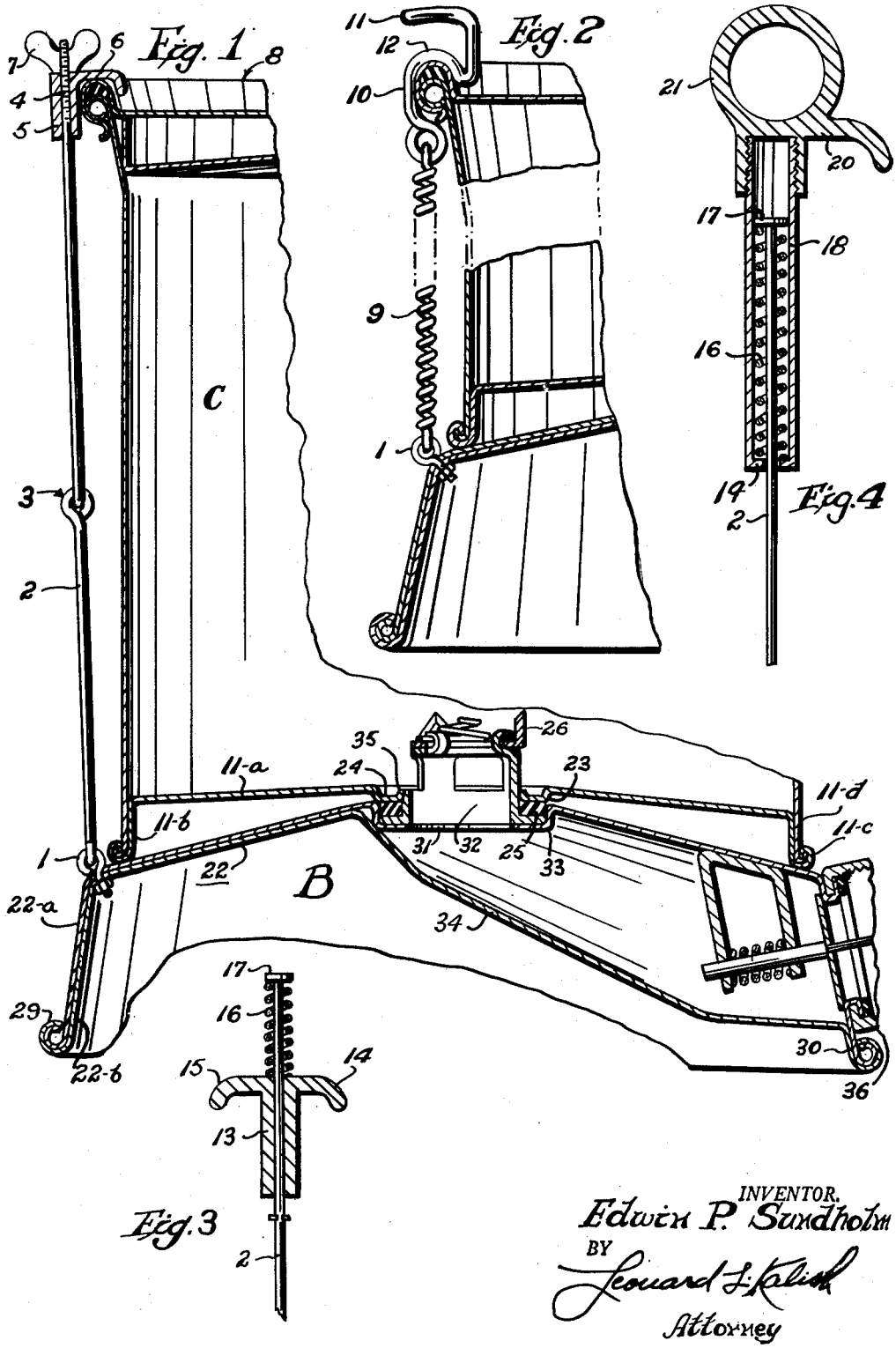

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GREASE GUN LOADING PAIL BASE FOR GREASE CONTAINERS WITH CUTTER AND INTERLOCK MEANS FOR SAID CONTAINERS

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The present invention relates to certain new and useful grease-gun-loading pail-base or pump-loading pail-base, for receiving, at its top, an original and relatively thin-walled and inexpensive vendable merchandising container (namely, a container in which the fluid or semi-fluid is originally packed, shipped, stored and sold), as, for instance, an original thin-walled sheet-metal pail of lubricant (such as grease or viscous oil) or of printers' ink, caulking compound, etc., and for receiving, at its side, the reservoir-barrel of a grease-gun or the like or a pump-cylinder, whereby the lubricant or other viscous fluid may be conveniently loaded directly from the original container into the reservoir-barrel of the grease-gun or into the pump-cylinder through the intervention of the gun-loading pail-base of the present invention.

One of the further objects of the present invention is to provide a gun-loading pail-base or transfer-base similar to the pail-bases or transfer-bases, but which will be adapted to receive and to operate with a standard pail or can without any special bayonet lugs or projections.

One of the objects of the present invention is to permit the use of a more or less standard or conventional pail rather than requiring a special pail.

Other objects of the present invention will appear from the following description and the accompanying drawings, wherein I have shown, for the purpose of illustrating my invention, forms thereof which are at present preferred, although it is to be understood that the various instrumentalities of which the invention consists can be variously arranged and organized and that the invention is not limited to the precise arrangements and organizations of the instrumentalities as herein shown and described.

In the accompanying drawings, in which like reference characters indicate like parts,

Figure 1 represents a fragmentary vertical cross-sectional view of a pail-base or transfer-base embodying the present invention with a fragmentary portion of a can depressed thereon in operative relation thereto.

Figure 2 represents a similar fragmentary vertical cross-sectional view, another embodiment of the present invention.

Figure 3 represents a vertical cross-sectional view of a modified form of can-gripping member.

Figure 4 represents a vertical cross-sectional view of another can-gripping member of a modified form of construction embodying the present invention.

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In the drawings, the pail or can is generally designated by the letter C, while the base is generally designated by the letter B.

The bottom 11–*a* of the container C, is provided with a downwardly depending more or less cylindrical flange-like portion 11–*b*, which telescopes into the lower end of the cylindrical body 11–*d* of the container C, to a greater or lesser extent, depending upon the axial length of flange 11–*b*, and is secured thereto by an interlocking crimped seam 11–*c*.

The sheet-metal bottom 11–*a*, of the container C, may have pressed into it, in a downward direction (or in an upward direction), an annular groove 23, to form a doughnut-like ridge or annulus on the outside (or on the inside) of the bottom 11–*a*; the outer (or inner) more or less flat or rounded annulus-like surface 24 of which constitutes a seating-surface for making sealing-contact with an annular sealing-gasket or ring 25 (of cork, grease-resistant rubber or composition or other suitable resilient material) carried by the base "B". The annulus 23 is preferably centered, or approximately centered, in relation to the periphery of the bottom 11–*a* of the container C.

The annulus 23 also serves to stiffen the center of the bottom 11–*a*, so that a circular disc-like portion, within the center of the annulus 23, can be more readily cut out or knocked out by the cutting action of the cutters (as in the embodiment herein shown and described) or by any other suitable disc-removal operation. The annulus 23 also serves to center or guide the cutters or knives 26, during the cutting operation, and serves also to stiffen and reinforce the center of the bottom 11–*a* after the disc has been cut out or removed therefrom.

In one embodiment of the base of my present invention, illustrated in the drawings, the base "B" may be formed of two members 22–*a* and 22–*b*, which may be welded to each other or may be interlocked by a seam 29, so as to form a generally unitary construction, in which each member supports and gives rigidity to the other, thereby permitting the two members to be formed (by pressing between dies or by spinning or by rolling, or the like) out of relatively thin sheet-steel as, for instance, 20 or 22 gauge sheet-steel for a base for a 25 lb. container, or other relatively thin sheet-metal, and yet maintaining adequate strength and rigidity in the finished base "B".

In the end-wall or "bottom" 22, a center aperture 31 is formed, and the material from the

aperture 31 may be pressed or drawn upwardly to form a short upstanding tube-like cutter-supporting intake-flange or intake member 32, although this tube-like cutter-supporting intake-flange or intake member is preferably formed separately, as shown, in the drawings, and spot-welded or crimp-seamed to the wall surrounding the aperture 31. The metal around the hole 31 may be pressed down in a downwardly extending annulus 33, forming an annular groove around the tube-like flange 32, for the reception and retention of the resilient and grease-resistant packing gasket or sealing-ring 25.

From the partition-wall or "bottom" 22, a radial channel 34, of more or less U-shaped cross-section, is pressed, in a downward direction, from a point which includes the projected area of the hole 31 (and may also include the projected area of the annulus 33), which channel 34 extends laterally outwardly to the side-wall 30, at one point, so as to form a fluid-conducting passageway or conduit in communication with the hole 35 which is ultimately formed in the bottom of the original container, pail or can "C", within the annulus 23 thereof, outwardly to the gun-receiving socket 36 formed in or affixed to the side of the base "B".

The base may be of a general construction with two or three anchorage members 1 which may be a form of eyelet or eyebolt extending through the wall of the base, as indicated in Figures 1 and 2, or it may be an anchorage formed integrally with the base or welded thereto.

To these anchorages 1, preferably uniformly distributed around the periphery of the base clamping rods 2, are loosely, and preferably pivotally secured in the manner indicated in Figure 1, and these rods may either be continuous or articulated as indicated at 3, by interlinking in chain fashion two shorter rods.

The upper end of the rod is preferably threaded as at 4, and a sleeve 5 having a rim-engaging claw 6, is telescoped over the threaded end 4 of the rod, and above it a wing-nut or other suitable threaded member 7 is threaded securely to the rod.

After the can C has been perforated and an opening cut in the bottom thereof by means of the cutter 26 carried by the base, the rim-engaging claws 6 are hooked over the rim 8 of the lid of the can and the wing-nuts 7 threaded down tightly until the can is pulled firmly against the base, preferably with its lower beaded edge resting firmly against the upper surface of the base.

In the modified forms of construction shown in Figures 2, 3 and 4, a spring is used in place of a screw and nut to hold the can tightly to the base.

In Figure 2 continuous helical tension springs 9 are linked to the anchorages, and to their upper ends bead engaging members 10 are linked, having handle portions 11 and rim-engaging portions 12.

By pulling member 10 upwardly and hooking it over the rim, the can can be held firmly to the base after the opening has been established in the bottom thereof.

In Figure 3 a modified form of construction is shown in which a sleeve 13 is placed loosely and slidingly over the rod 2 near the upper end thereof, and a rim-engaging claw 14 provided on one side of the sleeve and a handle member or finger-gripping member 15 on the other side thereof, a helical compression spring interposed between the top of the sleeve 13 and a terminal abutment 17 affixed to the upper end of the rod 2; the spring serving to urge the claw 14 downwardly.

The member 13 with its claw 14 is raised upwardly by the handle 15 against the force of the spring 16 to hook it to the rim of the can and the spring 16—this serves to force the can down against the base and hold it firmly in place.

In Figure 4 a modified form of construction is shown in which a hollow tubular member 18 is telescoped over the rod 2 and an upper terminal spring abutment 17 carried thereby, and the spring 16 is interposed between the abutment 17 and the inturned end or closed end 19 of the tube 18.

A rim-engaging member 20 is secured to the upper end of the tube 18 by being threaded thereto or otherwise secured thereto and having a handle portion 21 by which it can be raised to hook the member 20 over the rim of the can; the spring 16 thereafter serving to hold the can firmly against the base.

Having thus described my invention, what I claim as new and desire to be protected by Letters Patent is

1. Lubricant-dispensing apparatus for dispensing relatively viscous fluids through the bottom of a top-vented thin-walled original vendable merchandising container, said apparauts comprising a base constructed and arranged detachably to receive and engage an original vendable merchandising container containing relatively viscous fluid, said base having a bottom-portion adapted to rest on a floor or similar generally horizontal surface, and an upper container-receiving portion constructed and arranged to hold a generally cylindrical container in generally upright position and including an outer peripheral container-seat adapted to receive the bottom beaded peripheral seam of a container, and an inner fluid-sealing seat disposed generally concentrically with the outer peripheral container-seat, an inlet-opening through said upper container-receiving portion within said fluid-sealing seat, a suction-receiving socket on the side of said base for sealingly receiving and for making quick-attachable and quick-detachable engagement with the intake end of the barrel of a grease-gun or similar suction-producing device, a single conduit extending through said base and connecting said inlet-opening with said suction-reeciving socket, a cutter adjacent said inlet-opening and a plurality of container-securing means carried by said base near the outer periphery thereof, said container-securing means constructed and arranged to engage the uppermost edge of the container when the bottom beaded peripheral seam of said container is supported by and resting upon the outer peripheral container-seat, said container-securing means constructed and arranged to contract and to tension the container against the container-seat and the fluid-sealing seat of said base.

2. Lubricant-dispensing apparatus for dispensing relatively viscous fluids through the bottom of a top-vented thin-walled original vendable merchandising container, said apparatus comprising a base constructed and arranged detachably to receive and engage an original vendable merchandising container containing relatively viscous fluid, said base having a bottom-portion adapted to rest on a floor or similar generally horizontal surface, and an upper container-receiving portion constructed and arranged to hold a generally cylindrical container in generally upright position and including an outer peripheral container-seat adapted to receive the bottom

beaded peripheral seam of a container, and an inner fluid-sealing seat disposed generally concentrically with the outer peripheral container-seat, an inlet-opening through said upper container-receiving portion within said fluid-sealing seat, a suction-receiving socket on the side of said base for sealingly receiving and for making quick-attachable and quick-detachable engagement with the intake end of the barrel of a grease-gun or similar suction-producing device, a single conduit extending through said base and connecting said inlet-opening with said suction-receiving socket, a cutter adjacent said inlet-opening and a plurality of container-securing means carried by said base near the outer periphery thereof, said container-securing means constructed and arranged to engage the uppermost edge of the container when the bottom beaded peripheral seam of said container is supported by and resting upon the outer peripheral container-seat, said container-securing means including a tension spring constructed and arranged to contract and to tension the container against the container-seat and the fluid-sealing seat of said base.

3. Lubricant-dispensing apparatus for dispensing relatively viscous fluids through the bottom of a top-vented thin-walled original vendable merchandising container, said apparatus comprising a base constructed and arranged detachably to receive and engage an original vendable merchandising container containing relatively viscous fluid, said base having a bottom-portion adapted to rest on a floor or similar generally horizontal surface, and an upper container-receiving portion constructed and arranged to hold a generally cylindrical container in generally upright position and including an outer peripheral container-seat adapted to receive the bottom beaded peripheral seam of a container, and an inner fluid-sealing seat disposed generally concentrically with the outer peripheral container-seat, an inlet-opening through said upper container-receiving portion within said fluid-sealing seat, a suction-receiving socket on the side of said base for sealingly receiving and for making quick-attachable and quick-detachable engagement with the intake end of the barrel of a grease-gun or similar suction-producing device, a single conduit extending through said base and connecting said inlet-opening with said suction-receiving socket, a cutter adjacent said inlet-opening and a plurality of container-securing means carried by said base near the outer periphery thereof, said container-securing means constructed and arranged to engage the uppermost edge of the container when the bottom beaded peripheral seam of said container is supported by and resting upon the outer peripheral container-seat, said container-securing means comprising rigid articulated stays constructed and arranged to contract and to tension the container against the container-seat and the fluid sealing seat of said base.

4. Lubricant-dispensing apparatus for dispensing relatively viscous fluids through the bottom of a top-vented thin-walled original vendable merchandising container, said apparatus comprising a base constructed and arranged detachably to receive and engage an original vendable merchandising container containing relatively viscous fluid, said base having a bottom-portion adapted to rest on a floor or similar generally horizontal surface, and an upper container-receiving portion constructed and arranged to hold a generally cylindrical container in generally upright position and including an outer peripheral container-seat adapted to receive the bottom beaded peripheral seam of a container, and an inner fluid-sealing seat disposed generally concentrically with the outer peripheral container-seat, an inlet-opening through said upper container-receiving portion within said fluid-sealing seat, a suction-receiving socket on the side of said base for sealingly receiving and for making quick-attachable and quick-detachable engagement with the intake end of the barrel of a grease-gun or similar suction-producing device, a single conduit extending through said base and connecting said inlet-opening with said suction-receiving socket, a cutter adjacent said inlet-opening and a plurality of container-securing means carried by said base near the outer periphery thereof, said container-securing means constructed and arranged to engage the uppermost edge of the container when the bottom beaded peripheral seam of said container is supported by and resting upon the outer peripheral container-seat, said container-securing means each including a spring-tensioned rim-engaging hook at the upper end thereof constructed and arranged to contract and to tension the container against the container-seat and the fluid-sealing seat of said base.

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